NOTES ON LINKED LISTS

ERIC MARTIN

```
def reverse(self):
    if not self.head or not self.head.next_node:
        return
    node = self.head
    while node.next_node.next_node:
        node = node.next_node
    last_node = node.next_node
    node.next_node = None
    self.reverse()
    last_node.next_node = self.head
    self.head = last_node
```
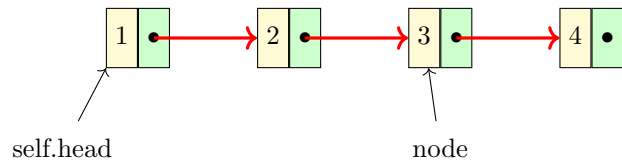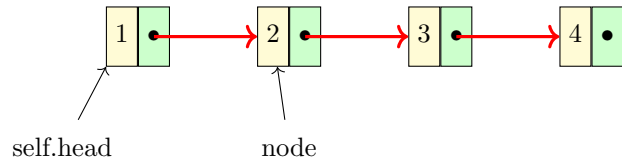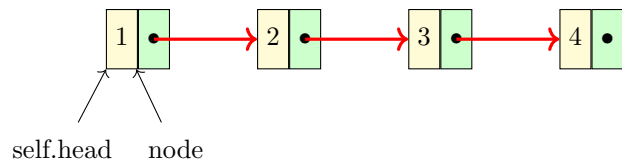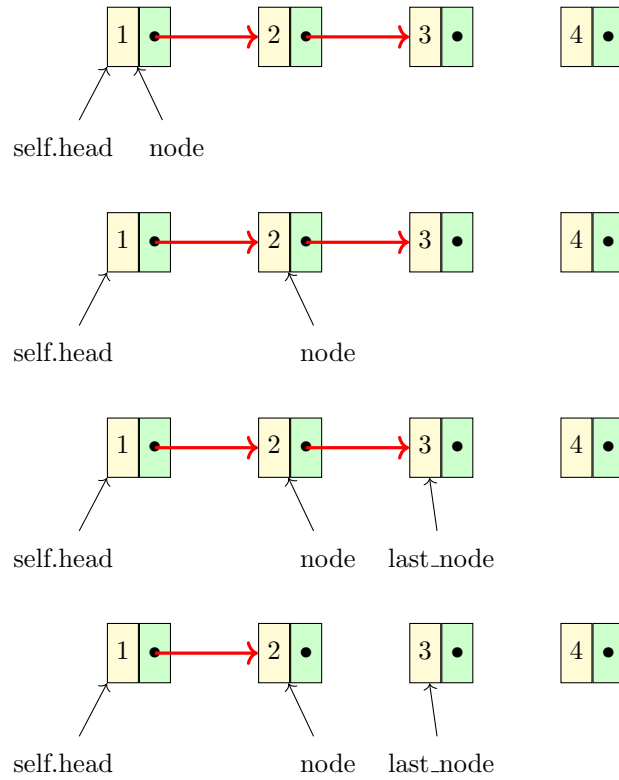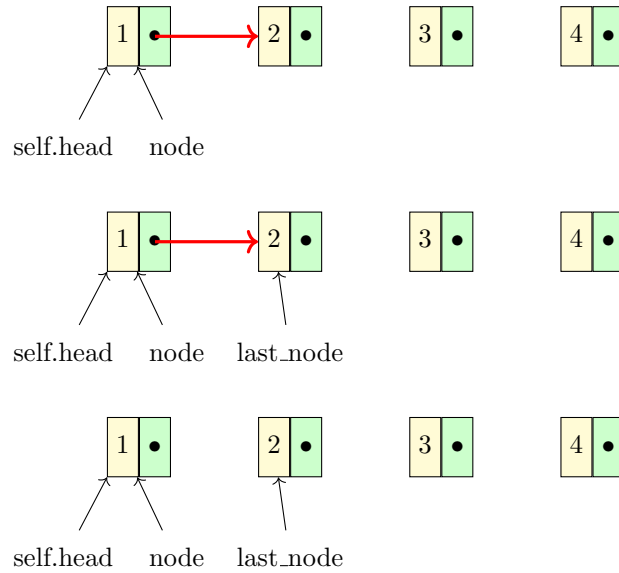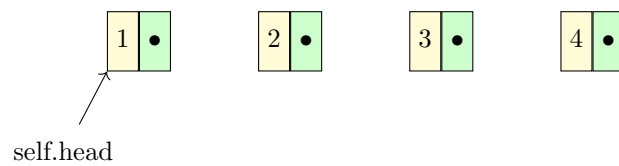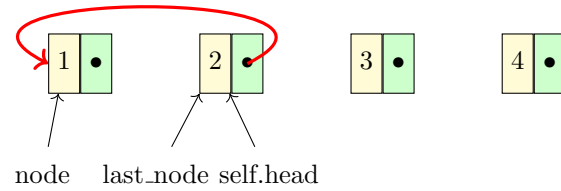
First call to `reverse()`

self.head   node

self.head   node

self.head   node

self.head   node   last_node

self.head   node   last_node

Second call to `reverse()`

1 ● → 2 ● → 3 ●   4 ●

self.head   node

1 ● → 2 ● → 3 ●   4 ●

self.head   node

1 ● → 2 ● → 3 ●   4 ●

self.head   node   last_node

1 ● → 2 ●   3 ●   4 ●

self.head   node   last_node

Third call to `reverse()`

1 ● → 2 ●   3 ●   4 ●

self.head   node

1 ● → 2 ●   3 ●   4 ●

self.head   node   last_node

1 ●   2 ●   3 ●   4 ●
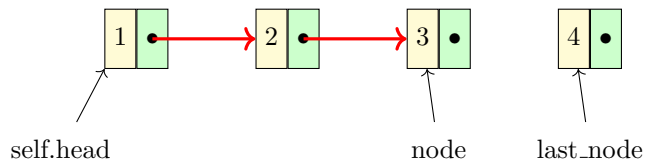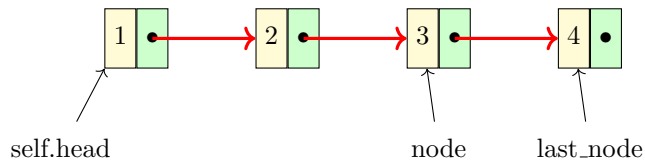
self.head   node   last_node

Fourth call to `reverse()`

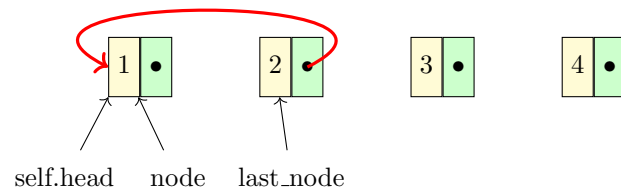1 ●   2 ●   3 ●   4 ●

self.head
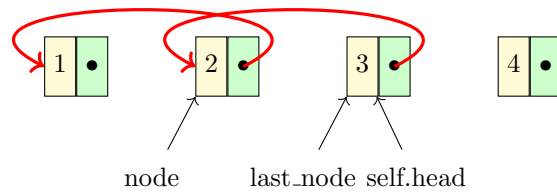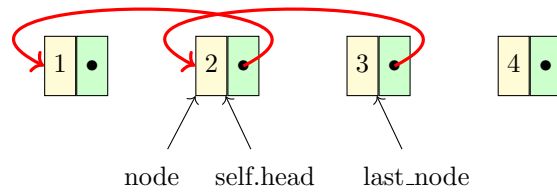
Back to third call to `reverse()`

Back to second call to `reverse()`

Back to first call to `reverse()`